

- b) placing said polyethylene beads under a vacuum to dry said beads;
- c) contacting said dried polyethylene beads with a solution of a olefin polymerization catalyst component to impregnate said beads with said catalyst component;;
- d) draining excess liquid from said accumulation of polyethylene beads; and
- e) drying said accumulation of polyethylene beads under an inert gas atmosphere.

18. (New) The method of claim 17 wherein said dried hollow beads are contacted with said catalyst solution for a period within the range of one half to about two hours.

19. (New) The method of claim 17 wherein the impregnation of said beads with said solution of olefin polymerization catalyst component is carried out under a vacuum followed by increasing the pressure on said accumulation of polyethylene beads prior to draining said excess liquid in subparagraph d).

20. (New) The method of claim 17 wherein said dry polyethylene beads are contacted with said solution of olefin polymerization catalyst at atmospheric pressure to provide a supported catalyst system in which said supported catalyst component is located predominantly on the surface of said hollow beads.

21. (New) The method of claim 20 wherein said hollow beads are contacted with said catalyst solution for a period of about one-half hour.

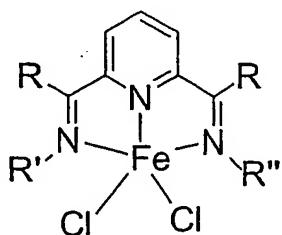
22. (New) The method of claim 17 wherein subsequent to the draining of said excess liquid from said hollow beads, said hollow beads are washed with a solvent for a period of time effective to remove said catalyst component from the surfaces of said beads to provide a supported catalyst system in which the supported catalyst component is predominantly located within the interior of said hollow beads.

23. (New) The method of claim 22 wherein said hollow beads are washed with said solvent for a period of time within the range of 20 seconds to 2 minutes.

24. (New) The method of claim 22 wherein said hollow beads are washed with said solvent for a period of time within the range of 30 to 60 seconds.

25. (New) The method of claim 17 wherein the said hollow polyethylene beads of subparagraph a) are prepared by

i) providing a supported catalyst component wherein the support comprises porous to functionalize beads of polystyrene and the catalyst component is covalently bound to the support and is an ion based complex characterized by the general formula (I)



wherein R is an alkyl group having from 1 - 20 carbon atoms and R' and R" are the same or different and are an alkyl group having from 1 – 20 carbon atoms or/an unsubstituted aryl group or a substituted aryl having at least one substituent having from 1 – 20 carbon atoms;

- ii. activating the supported catalyst component with an activating agent;
- iii. supplying ethylene to a reaction zone containing said supported catalyst component and maintaining said reaction zone under polymerization conditions; and
- iv. retrieving hollow polyethylene beads from said reaction zone to provide said accumulation of hollow polyethylene beads.

26. (New) The method of claim 25 wherein R is a C<sub>1</sub> – C<sub>4</sub> alkyl group.

27. (New) The method of claim 26 wherein R is a methyl group.

28. (New) The method of claim 27 wherein R' and R" are the same and are a substituted or unsubstituted phenyl group.

29. (New) The method of claim 28 wherein R' and R" are substituted phenyl groups with substituents at the 2 and 6 position.

30. (New) The method of claim 29 wherein said substituents are selected from the group consisting of methyl, isopropyl, and tertiary butyl group.

31. (New) The method of claim 29 wherein substituents are isopropyl groups.

32. (New) The method of claim 31 wherein said phenyl groups are substituted at the 2, 4 and 6 positions.

33. (New) A supported catalyst system comprising:

- a) a supported catalyst component produced by the process;
  - i) providing an accumulation of hollow polyethylene beads;
  - ii) placing said polyethylene beads under a vacuum to dry said beads;
  - iii) contacting said dried polyethylene beads with a solution of an olefin polymerization catalyst component to impregnate said beads with said catalyst component;
  - iv) draining excess liquid from said accumulation of polyethylene beads;
  - v) drying said accumulation of polyethylene beads under an inert gas atmosphere;
  - vi) recovering said polyethylene beads containing said catalyst component supported thereon;
- b) an activating agent in contact with said supported catalyst component.

34. (New) The supported catalyst system of claim 33 wherein said activating agent is methylalumoxane.

35. (New) A method for the preparation of a bimodal polymer comprising:
- a) preparing hollow polyethylene beads in a first reaction zone;
  - b) recovering an accumulation of said hollow polyethylene beads from said first reaction zone;
  - c) preparing a supported olefin polymerization catalyst system comprising an olefin polymerization catalyst supported on an accumulation of said hollow polyethylene beads and an activating agent for said supported catalyst component;
  - d) supplying the catalyst system of subparagraph c) to a second reaction zone;
  - e) supplying an alpha olefin monomer to said second reaction zone;
  - f) maintaining said second reaction zone under conditions effective for the polymerization of said alpha olefin monomer; and
  - g) recovering a bimodal polymer of said alpha olefin monomer from said second reaction zone.

36. (New) The method of claim 35 wherein the alpha olefin monomer supplied to said second reaction zone is a C<sub>2</sub>-C<sub>4</sub> alpha olefin.

37. (New) The method of claim 36 wherein said first and second reaction zones comprise loop type reactors.